Mutation Research, 42 (1977) 457—460
© Elsevier/North-Holland Biomedical Press

CONTENTS

VOLUME 42 (1977)

Obituary note . . . . . 1—2

The influence of pH on the effects of 2,4-D (2,4-dichlorophenoxyacetic acid, Na salt) on *Saccharomyces cerevisiae* and *Salmonella typhimurium*
by G. Zetterberg, L. Busk, R. Elovson, I. Starec-Nordenhammer and H. Ryttmann (Uppsala, Swedem) (Rec'd March 15th, 1976) . . . . . 3—18

Development and applications of *Bacillus subtilis* test systems for mutagens, involving DNA-repair deficiency and suppressible auxotrophic mutations
by H. Tanooka (Tokyo, Japan) (Rec'd April 5th, 1976) . . . . . 19—32

Mutagenic DNA repair in *Escherichia coli*. V. Mutation frequency decline and error-free post-replication repair in an excision-proficient strain
by M.H.L. Green, B.A. Bridges, J.E. Eyfjörd and W.J. Muriel (Brighton, Great Britain) (Rec'd April 12th, 1976) . . . . . 33—44

Genetic effects of some new bifunctional and water-soluble analogs of the anticancer agent 1,3-bis(2-chloroethyl)-1-nitrosourea (BCNU) in *Saccharomyces cerevisiae*
by D. Siebert and G. Eisenbrand (Heidelberg, G.F.R.) (Rec'd April 20th, 1976) . . . . . 45—50

Repair of single-strand DNA breaks and recovery of chromosomal and chromatid aberrations after treatment of plant seeds with propyl methanesulfonate in vivo
by V.N. Soyfer, G.V. Krausse, A.A. Pokrovskaya and N.I. Yakovleva (Moscow, U.S.S.R.) (Rec'd March 8th, 1976) . . . . . 51—64

Induction of DNA single-strand breaks in barley by sodium azide applied at pH 3
by J. Velemínský, T. Gichner and V. Pokorný (Prague, Czechoslovakia) (Rec'd April 4th, 1976) . . . . . 65—70

Repair of radiation-induced single-stand breaks in DNA of barley embryo
by S. Tano and H. Yamaguchi (Tokyo, Japan) (Rec'd June 6th, 1976) . . . . . 71—78

Genetic control of *Hylemua antiqua*. I. X-ray-induced effects in the F_0 and F_1 generations
by A.S. Robinson (Wageningen, The Netherlands) (Rec'd Feb. 6th, 1976) . . . 79—88

Spontaneous non-reciprocal mutation and sterility in strain crosses of *Drosophila melanogaster*
by M.G. Kidwell, J.F. Kidwell and P.T. Ives (Amherst, Mass., U.S.A.) (Rec'd Feb. 24th, 1976) . . . . . 89—98

The effect of exposure rate on translocation induction in somatic and germ cells of the mouse (*Mus musculus*)
by P.P.W. van Buul and R.A. Chr. Roos (Leiden, The Netherlands) (Rec'd May 25th, 1976) . . . . . 99—108

Study on cytological effects of carofur — a new mutagen
by B.K. Vig, A.T. Natarajan and F.K. Zimmermann (Reno, Nv., U.S.A.; Leiden, The Netherlands; and Darmstadt, West Germany) (Rec'd May 25th, 1976) . . . . . 109—116

Chromosome aberrations and dominant lethality of mouse embryos after paternal treatment with triethylenemelamine
by S. Hitotsumachi and Y. Kikuchi (Osaka, Japan) (Rec'd June 6th, 1976) . . 117—124
Non-random distribution of cyclophosphamide-indeced chromosome breaks
by M. Morad and M. El Zawahri (Assiut, Egypt) (Rec'd August. 4th, 1976) . . 125—130
Unrepaired double-strand breaks in nuclear DNA are not always lethal
by M.A. Resnick (Rochester, N.Y., U.S.A.) (Rec'd May 28th, 1976) . . . . . 131—134
Methyl methanesulphonate-induced dominant lethal mutations in male mice detected in vitro
by L.S. Goldstein (San Francisco, Calif., U.S.A.) (Rec'd June 25th, 1976) . . . 135—138
Mutagenesis by fluorescent light in mammalian cell cultures
by R.F. Jostes, W.C. Dewey and L.E. Hopwood (Fort Collins, Colo, U.S.A.) (Rec'd June 17th, 1976) . . . . . 139—144
The relation between induced mutation frequency and cell survival — a theoretical approach and an examination of experimental data for eukaryotes
by R.J. Munson and D.T. Goodhead (Oxon, England) (Rec'd May 26th, 1976) . . . . . 145—160
Pesticide induced DNA damage and its reapir in cultured human cells
by F.E. Ahmed, R.W. Hart and N.J. Lewis (Columbus, Ohio, U.S.A.) (Rec'd July 20th, 1976) . . . . . 161—174
Mutation induction by the direct treatment of *Bacillus subtilis* deoxyribonucleic acid
by I.C. Felkner (Lubbock, Texas, U.S.A.) (Rec'd June 1st, 1976) . . . . . 175—180
Sulphydryl-mediated DNA breakage by phleomycin in *Escherichia coli*
by M.J. Sleigh and G.W. Grigg (Epping, Australia) (Rec'd Aug. 8th, 1976) . . . 181—190
Lethal effect of nitrous acid on *Escherichia coli*
by Zs. Nagy, M. Solymossy and F. Antoni (Budapest, Hungary) (Rec'd July 7th, 1976) . . . . . 191—203
Induced reactivation of UV-damaged phage λ in *E. coli* K12 host cells treated with aflatoxin B_1 metabolites
by A. Sarasin, A. Goze, R. Devoret and Y. Moule (Gif-sur-Yvette, France) (Rec'd Aug. 10th, 1976) . . . . . 205—214
Optimal conditions for selecting specific auxotrophs of *Saccharomyces cerevisiae* using temperature-sensitive suicide mutants
by I.D. Hardie and I.W. Dawes (Edinburgh, Scotland) (Rec'd May 26th, 1976) . . . . . 215—222
Molecular specificity of X-radiation and its repair in *Saccharomyces cerevisiae*
by G.E. Magni, L. Panzeri and S. Sora (Milano, Italy) (Rec'd June 11th, 1976) . . . . . 223—234
Systemes instables induits chez le petunia
by A. Cornu (Dijon, France) (Rec'd June 18th, 1976) . . . . . 235—248
Ultrastructural observations of X-ray induced chromatid gaps
by S. Brecher (Davis, Ca., U.S.A.) (Rec'd July 15th, 1976) . . . . . 249—268
Dominant lethal assays in male mice: evaluation of experimental design, statistical methods and the sensitivity of Charles Rives (CD1) mice
by B.J. Dean and A. Johnstone (Kent, England) (Rec'd June 1st, 1976) . . . . 269—278
Prospects for evaluating genetic damage in mammalian cells in culture
by A. Abbondandolo (Pisa, Italy) (Rec'd July 7th, 1976) . . . . . 279—298
Inhibition of initiation of HeLa replicons by methyl methanesulfonate
by R.B. Painter (San Francisco, Ca., U.S.A.) (Rec'd July 29th, 1976) . . . . . 299—304
The incidence of sister chromatid exchanges in cultured human lymphocytes
by W.F. Morgan and P.E. Crossen (Christchurch, New Zealand) (Rec'd Aug. 31st, 1976) . . . . . 305—312
The induction of thioguanine-resistant mutants of Chinese hamster cells by γ-rays
by J. Thacker, A. Stretch and M.A. Stephens (Oxon, England) (Rec'd Feb. 2nd, 1976) . . . . . 313—326

9-Aminoacridine — a frameshift mutagen for *Salmonella typhimurium* TA 1537 inactive at the *hgprt* locus in human lymphoblasts
by J.G. DeLuca, J. Krolewski, T.R. Skopek, D.A. Kaden and W.G. Thilly (Rec'd Aug. 10th, 1976) . . . . . 327—330
Errata 331
Announcement 333
Mutagenicities of quinoline and its derivatives
by M. Nagao, T. Yahagi, Y. Seino, T. Sugimura and N. Ito (Nagoya, Japan) (Rec'd Aug. 16th, 1976) . . . . . 335—342
Manganese mutagenesis in yeast. V. On mutation and conversion induction in nuclear DNA
by H. Baranowska, A. Ejchart and A. Putrament (Warsaw, Poland) (Rec'd May 17th, 1976) . . . . . 343—348
Mechanism of hycanthone mutagenesis: the induction of temperature-sensitive mutations in *Drosophila melanogaster*
by P.G.N. Kramers (Leiden, The Netherlands) (Rec'd July 2nd, 1976) . . . . . 349—356
Mouse oocyte dominant-lethal response to chronic gamma irradiation
by I.A. Baev, I.M. Rupova, A.K. Vuglenov and A.K. Karadjov (Sofia, Bulgaria) (Rec'd Feb. 11th, 1976) . . . . . 357—362
The frequency of recessive lethal heterozygotes among individuals obtained from inbred strains. A random-number simulation study
by N. Ryman (Stockholm, Sweden) (Rec'd March 15th, 1976) . . . . . 363—372
Culture of pre-implantation Chinese hamster (*Cricetulus griseus*) embryos in vitro
by A. Basler and G. Röhrborn (Düsseldorf, Germany) (Rec'd June 23rd, 1976) 373—378
Chromosomal radiosensitivity and karyotype in mice using cultured peripheral blood lymphocytes, and comparison with system in man
by P. de Boer, P.P.W. van Buul, R. van Beek, F.A. van der Hoeven and A.T. Natarajan (Wageningen and Leiden, The Netherlands) (Rec'd Sept. 9th 1976) . . . . . 379—394
Chromosome aberrations in the leukocytes of pigs after half-body or whole-body irradiation
by A.F. McFee (Oak Ridge, Tenn., U.S.A.) (Rec'd Aug. 20th, 1976) . . . . . 395—400
The effect of X-ray induced mitotic delay on chromosome aberration yields in human lymphocytes
by D.C. Lloyd, G.W. Dolphin, R.J. Purrott and P.A. Tipper (Oxon, U.K.) (Rec'd Aug. 25th, 1976) . . . . . 401—412
The inhibition of repair in UV irradiated human cells
by A.R.S. Collins, S.L. Schor and R.T. Johnson (Cambridge, England) (Rec'd July 21st, 1976) . . . . . 413—432
Semi-conservative deoxyribonucleic acid synthesis in unirradiated and ultraviolet-irradiated xeroderma pigmentosum and normal human skin fibroblasts
by J.M. Rudé and E.C. Friedberg (Stanford, Calif., U.S.A.) (Rec'd Aug. 6th, 1976) . . . . . 433—442
The frameshift mutability of *polA1* and *recA1* derivatives of mutator strains of *Escherichia coli*
by K.K. Vaccaro and E.C. Siegel (Medford, Mass., U.S.A.) (Rec'd Aug. 4th 1976) . . . . . 443—446
Nitrate regulation of heterocyst differentiation and nitrogen fixation in a chlorate-resistant mutant of the blue-green alga, *Nostoc muscorum*
by H.N. Singh, K.C. Sonie and H.R. Singh (Varanasi, India) (Rec'd March 18th, 1976) . . . . . 447—452
Intrachromosomal distribution of chromatid aberrations induced by *N*-methyl-*N*-nitrosourethane in *Triticum durum* Desf
by H. Nicoloff and S. Georgiev (Sofia, Bulgaria) (Rec'd June 29th, 1976) . . . 453—456
Contents Vol. 42 (1977) . . . . . 457—460
Author index Vol. 42 (1977) . . . . . 461—462
Subject index Vol. 42 (1977) . . . . . 463—472
Announcements . . . . . 473—474